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20. ABSTRACT (Continue on reverse side if necessary and identify by block number) The overall study is designed to produce reliable, valid measures of combat effectiveness of units with a goal of understanding why and how some units succeed and others fail. The methodology involves coding historical cases of U.S. Marine Corps infantry battalions for mission accomplishment, unit attributes, contextual variables, and mission types, then analyzing the results with regression and other appropriate statistical techniques. This memorandum includes material on case selection and drafting of narrative summaries.		

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WASHINGTON, D.C. OFFICES

MEASUREMENT OF UNIT EFFECTIVENESS IN MARINE CORPS INFANTRY BATTALIONS

Technical Report

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Sponsored by:

Defense Advanced Research Projects Agency

ARPA Order Number	3379
Program Code Number	TL10
Program Element Number	62711E
Contractor	CACI, Inc.-Federal
Effective Date of Contract	March 23, 1977
Contract Expiration Date	August 31, 1977
Amount of Contract	\$99,629
Contract Number	MDA903-77-C-0199
Principal Investigator	Dr. Richard E. Hayes (703) 841-7846
Short Title of Work	Effectiveness of Infantry Battalions
Date of Report	May 31, 1977
Period Covered by Report	April 30, 1977-May 31, 1977

The views and conclusions contained in this document are those of the authors and should not be interpreted as necessarily representing the official policies, either expressed or implied, of the Defense Advanced Research Projects Agency or the U.S. Government.



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TECHNICAL MEMORANDUM NO. 2

SUBJECT: Tasks 3 and 4 of Contract No. MDA903-77-C-0199
"Measurement of Unit Effectiveness in Marine Corps Infantry
Battalions"

TO: LTC Richard Johnson, USMC

FROM: Richard E. Hayes, CACI, Inc.-Federal

DATE: May 31, 1977

This document and its attachments constitute Item 002AC, "Technical Memorandum, Tasks 3 and 4," under Contract No. MDA903-77-C-0199. Task 3 calls for the Contractor to select a set of military operations to serve as the analytical base for the research. Task 4 calls for developing descriptive materials related to each operation selected.

Task 3 has been completed, despite some logistical problems which delayed the study team. Table 1 lists the engagements selected.

- Five Republic of Vietnam (RVN) operations.
- Five Korean conflict operations.
- Nine World War II operations.
- Three special operations, including the evacuation of Saigon, Dominican Republic actions, and the Lebanon landings in 1958.

In addition, preliminary research into eight other Korean actions, the evacuation from Pnom Phen, and exercises in the NATO area suggests that they might be candidates for inclusion.

Discussions with personnel from the USMC Museum and Library and with LTC Johnson, the COTR, produced several guidelines for choosing engagements. First, a decision was made to concentrate primarily on units that operated

TABLE 1
Engagements Selected

<u>Group</u>	<u>Unit</u>	<u>Short Title</u>	<u>Unit Mission</u>	<u>Reason For Selection</u>	<u>Data Status</u>	<u>Draft Completed</u>	<u>Map Availability</u>
RVN	2/4	Starlite	Assault, Search	Heavy Contact	Good	X	X
RVN	3/9	Devey Canyon	Conventional Attack	Enemy Anti-Air	Good	X	X
RVN	2/5	Hue City	Counter-attack	Urban Fighting	Good	X	X
RVN	2/3	1st Khe Sanh	Assault	NVA Opposition	Adequate	X	X
RVN	3/3	1st Khe Sanh	Assault	Heavy Opposition	Adequate	X	X
Korea	3/5	Inchon	Amphibious Assault	Nasty Planning	Good	X	X
Korea	2/1	Yongdungpo	Attack	Urban, Anti-Mechanized	Good		
Korea	3/5 or 2/1	Seoul	Attack	Urban Fighting	Adequate		
Korea	1/5	Clamake	Hill Assault	3 Weeks Planning	Good		
Korea	1/5	Item	Hill Assault	Mission Not Accomplished	Adequate		
WW II	3/1	Peleliu	Amphibious Assault	Difficult Mission	Good	X	X
WW II	2/11	Peleliu	Attack	Intense Fighting	Good	X	X
WW II	3/2	Tarawa	Amphibious Assault	Poor Performance	Good		
WW II	2/8	Tarawa	Amphibious Assault	Comparison w/3/2	Good		
WW II	2/9	Guam	Amphibious Assault	Difficult Mission	Adequate		
WW II	1/3	Guam	Amphibious Assault	Comparison w/2/9	Good		
WW II	3/25	Iwo Jima	Amphibious Assault	Enfilading Fire On Beach	Adequate		
WW II	2/28	Iwo Jima	Attack	Difficult Mission	Adequate		
WW II	3/29	Okinawa	Attack	Heavy Defense	Good		
Special		Saigon	Evacuation	Mission	Adequate		
Special		Dominican Republic	Land Secure Area	Urban Mission	Adequate		
Special		Lebanon	Amphibious Assault	Exercise Comparison	Adequate		

largely independently. This facilitates data collection and evaluation. Second, units engaged in offensive operations were to be favored in the set. This will enhance comparability of the cases and provide a basis for more systematic analysis. Third, the research team was cautioned, particularly by historians from the Museum and Library, against oversampling from Vietnam. The artificial nature of many reporting statistics and the relatively unique battlefield conditions in that conflict are seen as problems. Hence, only five RVN actions are included in the sample set.

Discussions with LTC Johnson on 6 May produced additional guidance to help the research effort focus on emerging elements of threat. Where possible, engagements involving extensive enemy anti-air capabilities, enemy mechanized forces, and urban conflict are to be included in the analysis. Dewey Canyon and the Khesan engagements were chosen for enemy anti-air. Yongdungpo was selected for enemy mechanized forces and urban fighting. Hue City and Seoul are intense urban conflicts. At the suggestion of the COTR, an effort was made to locate an available, detailed source on 1973 Middle East war operations, which reflect extensive enemy anti-air capability. It appears that this data could not be developed within the level of effort available under the terms of the current contract. The research team recommends that consideration be given to including these analyses in an FY78 effort focused specifically on key battlefield features.

As Table 1 shows, eight draft unit narratives have been completed to date. The current schedule calls for 12 by June 3, 18 by June 10, and 25 by June 17. The possibility of reducing the total number of engagements will have to be entertained if these deadlines prove intensive. Adequate maps have proven to be a problem for a number of these engagements, and the COTR has been requested to assist in acquisition of standard map sheets for as many engagements as possible.

Finally, the research team has decided to revise the data coding sheets to reflect (a) the typical level of detail available for the selected cases and (b) the extent to which the unit, as opposed to higher headquarters or supporting units, was in control of each function. These revisions, to be completed by 24 June, will greatly increase the coherence of the data analyses.

TABLE 2
Engagements Under Review

<u>Group</u>	<u>Unit</u>	<u>Short Title Chosen</u>	<u>Unit Mission</u>	<u>Reason For Selection</u>	<u>Data Status</u>	<u>Draft Completed</u>	<u>Map Availability</u>
Korea	1/1		Attack; Break-out	Mission	Good		
Korea	1/1, 2/1, or 1/5	Killer I	Attack	Maneuver Warfare	Good		
Korea	1/7 or 3/7	Killer II	Attack	Maneuver Warfare	Good		
Korea	2/1	Ripper	Assault on Hill	Mission	Good		
Korea	1/7 or 3/1	The Hook	Counterattack on Hill	Mission; Resistance	Adequate		
Korea	2/1	Wakeup Raid	Raid on Fixed Positions	Long Planning	Adequate		
Korea	2/5	Charlie	Raid on Fixed Positions	Attempted Surprise	Adequate		
Korea	3/1	Boulder City Hill	Counterattack	Mission	Adequate		
Special Exercise		Phnom Penh Mediterranean	Evacuation Amphibious Assault	Mission Exercise	Adequate Uncertain		
Exercise		Turkey	Amphibious Assault	Exercise	Uncertain		